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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,809	05/24/2001	Gerard Jay Bellasalma	60137-026	2588

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CARLSON, GASKEY & OLDS, P.C.
400 WEST MAPLE ROAD
SUITE 350
BIRMINGHAM, MI 48009

EXAMINER

SORKIN, DAVID L

ART UNIT PAPER NUMBER

1723

DATE MAILED: 03/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

6

Office Action Summary

Application No.

09/864,809

Applicant(s)

BELLASALMA ET AL.

Examiner

David L. Sorkin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 and 26-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 and 26-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 07 January 2003 is: a) ☐ approved b) ☒ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 07 January 2003 have been disapproved. While several of the objections set for the in the previous office action have been addressed, reference character 46, mentioned in, for example, paragraph [25] still does not appear. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

Specification

2. It is noted that applicant did not provide a properly marked-up copy of paragraph [18]. However, all amendments have been entered.

Claim Objections

3. Claims 1-16, 26, 27 and 30 are objected to. Now that these claims require "a mix head", the preamble of claim 1, should not read "A valve assembly for a mix head assembly...", but should instead read, for example, - - A mix head assembly... - -, to comply with 37 CFR 1.75(d)(1).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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5. Claims 1-22 and 26-31 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In paragraph [28], it is stated that in the position of Fig. 2B, "flow through opening 36A when valve 32A is in fully open position (Figure 2B) provides the limiting flow restriction". How can the opening provide a restriction when it is "sized to be of the same diameter of passage 30" and aligned with passage 30 in a fully open position? Furthermore, paragraph [28] and Fig. 2B describe and depict valves 32b and 32c being more restricted than valve 32a. The laws of physics dictate that most restricted point along the flow path is the limiting restriction, not the least restricted. Similarly, in paragraph [32], the statement "valve 32C is partially open to the extent that valve 32B is the limiting restriction in passage 30", contradicts the drawing which shows valve 32c being most restricted and the earlier statement in the same paragraph that valves 32a and 32b are fully open while 32c is partially open. Furthermore, the originally filed specification provided contradictory information concerning what the sizes of the valve apertures (36a-36c) should be. According to paragraph [7] "Each valve includes an opening larger than the previous valve". According to paragraph [26] of the specification, the opening of the middle valve should be larger than the other two. According to claims 20-22, the opening near the outlet is the smallest. All-the-while, the drawings depict each of the apertures 36a-36c being the same size.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 27 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. In claim 27, there is lack of antecedent basis for "each of said valve assemblies" and "said valve housings". The only previously recited valve assembly is that of the preamble of claim 1. While it appears that applicant is attempting to recite a plurality of valve assemblies each communicating with the mix head, the scope of the valve assemblies must be clear.

9. In claim 29, there is lack of antecedent basis for "each of said valve assemblies". While it appears that applicant is attempting to recite a plurality of valve assemblies each communicating with the mix head, the scope of the valve assemblies must be clear.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Note: regarding scope of the instant claims, "where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation" *Rowe v. Dror*, 42 USPQ2d 1550, 1553 (Fed. Cir. 1997). There is no indication that applicant

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is claiming the mold (23) discussed in the specification. While a "mix head" having an inlet and outlet is positively recited in independent claims 1 and 17, such a broad recitation is satisfied, for example, by any tube, conduit or duct. On the other hand, although unclear in scope as discussed above, claims 27 and 29, appear to distinguish the "mix head" from a simple tube, conduit or duct by requiring a plurality of circumferentially located valve assemblies communicating with the mix head.

12. Claims 1-7 and 17-19, 26, 28, and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Larsen (US 1,196,121). Regarding claim 1, Larsen ('121) discloses a valve assembly comprising a mix head (6,5 the bottom one in Fig. 3) comprising an inlet to and outlet from a mix section, an input port to a passage (see tops of Figs. 1-3); a plurality of sequentially activatable valves (including 8,8') communicating with said passage to selectively suppress flow through the passage; and an output passage to said mix head (see bottoms of Figs. 1-3). Regarding claim 2, a controller sequentially activates the valves to meter an initial flow (see page 1 line 89 to page 2 line 27). Regarding claim 3, said controller activates each of said plurality of valves in response to a predetermined pressure (see col. 4, lines 15-72). Regarding claim 4, each of said valves includes a spring bias (12). Regarding claim 5, each valve includes a spring bias (12) toward an open position. Regarding claim 6, the assembly includes a pneumatic actuator to selectively active each valves (see page 2, lines 20-27). Regarding claim 7, each valve defines a longitudinal axis and provides an opening transverse to the axis and alignable with said passage (see Figs. 2 and 3). Regarding claim 17, Larsen ('121) discloses a system comprising a mix head (6,5 the bottom one

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in Fig. 3) comprising an inlet to and outlet from a mix section; an input port to a passage (see tops of Figs. 1-3), said input port communicating with a feed assembly (see Figs. 1-3); a plurality of sequentially activatable valves (including 8,8') each defining a longitudinal axis, each of said plurality of valves including an opening transverse to the longitudinal axis alignable with said passage to selectively suppress a flow of fluid through said passage (see Figs. 2 and 3); a bias (12) adjacent each of said plurality of sequentially activatable valves to bias said valve toward an open position; an actuator to selectively activate each of said plurality of sequentially activatable valves (see page 1 line 89 to page 2 line 27); and an output port from said passage, said output port communicating with said mix head (see bottom of Fig. 3). Regarding claim 18, a controller sequentially activates said valves (see page 1 line 89 to page 2 line 27). Regarding claim 19, the controller activates each valve in response to a predetermined pressure (see page 1 line 89 to page 2 line 27). Regarding claims 26 and 28, the plurality of sequentially activated valves is located within a valve housing mounted adjacent said mix section (see Fig. 3). Regarding claims 30 and 31, said plurality of sequentially activatable valves intersect said passage in a substantially perpendicular orientation (see Figs. 1-3; page 1, lines 54-58).

13. Claims 1-5, 7-10, 12-21, 26, 28 and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Paulson (US 887,120). Regarding claim 1, Paulson ('120) discloses a valve assembly comprising a mix head (30 or a downstream portion thereof) comprising an inlet to and outlet from a mix section, an input port to a passage; a plurality of sequentially activatable valves (15/18, 16/19, 17/20) communicating with

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said passage to selectively suppress flow through the passage; and an output passage (see drawing). Regarding claim 2, the arrangement includes a controller (39,40) to sequentially activate said valves to meter an initial flow. Claim 3 only discusses how the device is intended to be operated and fails to further structurally limit the claimed device. One could operate the assembly in the manner described. Regarding claim 4, each of said valves includes a spring bias (41). Regarding claim 5, each valve includes a spring bias (41) toward an open position. Regarding claim 7, each valve defines a longitudinal axis and provides an opening (for example, 31, 34, 37) transverse to the axis and alignable with said passage (see drawing). Regarding claim 8, first, second and third valves (15-20) are disclosed each having a longitudinal axis transverse to the passage. Regarding claim 9, first valve (16/19) is adjacent the input port. Regarding claim 10, each valve includes an aperture (for example, 31, 34, 37). The apparatus is capable of being operated in the manner described in claims 12-16. Regarding claim 17, Paulson ('120) discloses a system comprising a mix head (30 or a downstream portion thereof); an input port to a passage (53), said input port communicating with a feed assembly; a plurality of sequentially activatable valves (15/18, 16/19, 17/20) each defining a longitudinal axis, each of said plurality of valves including an opening (for example, 31, 34, 37) transverse to the longitudinal axis an alignable with said passage to selectively suppress a flow of fluid through said passage; a bias (41) adjacent each of said plurality of sequentially activatable valves to bias said valve toward and open position; an actuator (40) to selectively activate each of said plurality of sequentially activatable valves; and an output port (from 17 to 30) from said passage, said output

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port communicating with said mix head. Regarding claim 18, a controller (40) is capable of sequentially activating said valves. Claim 19 only discusses how the device is intended to be operated and fails to further structurally limit the claimed device. One could operate the assembly in the manner described. Regarding claim 20, three valves 15/18, 16/19, 17/20) are disclosed. Regarding claim 21, each valve includes an aperture (for example, 31, 34, 37). Regarding claims 26 and 28, the plurality of sequentially activated valves is located within a valve housing mounted adjacent said mix section (see drawing). Regarding claims 30 and 31, said plurality of sequentially activatable valves intersect said passage in a substantially perpendicular orientation (see drawing).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 8-10, 12-16, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen (US 1,196,121). Regarding claims 8 and 20, Larsen ('121) discloses two valves rather than three; however, it has been held that it is obvious to duplicate parts for a combined or multiplied effect. See *St. Regis Paper Company v. Bemis Company, Inc.* 193 USPQ 8 (CA 1977) and *In re Harza* 124 USPQ 378 (CCPA 1960). Regarding claim 9, the first valve is adjacent the input port (see Figs. 1-3).

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Regarding claim 10 and 21, the valves have apertures (see Fig. 2). The apparatus is capable of being operated in the manner described in claims 12-16.

Response to Arguments

16. Applicant acknowledges the rejection of claims under section 112 first paragraph, and replies that "Applicant has slightly modified paragraphs [28] and [32] to more fully describe the valve operation and address the concerns noted". However, the specification must satisfy section 112, first paragraph at the time of filing. See "MPEP 2164.05(a) Specification Must Be Enabling as of the Filing Date".

17. Applicant asserts that the claimed "mix head" is not disclosed by the prior art, but fails to point out any structural differences. While, as discussed above, the examiner acknowledges that the mixer head assembly of the instant disclosure includes a plurality of circumferentially located valve assemblies communicating with the mixer head, the claims to which prior art has been applied are not limited to such an assembly.

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

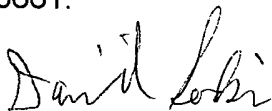
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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Sorkin whose telephone number is 703-308-1121. The examiner can normally be reached on 8:00 -5:30 Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 703-308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



David Sorkin

March 13, 2003



CHARLES E. COOLEY
PRIMARY EXAMINER